


STATE OF NEW HAMPSHIRE  
INTER-DEPARTMENT COMMUNICATION

 **DATE:** June 9, 2016

**FROM:** Matt Urban  
Wetlands Program Manager **AT (OFFICE):** Department of  
Transportation

**SUBJECT** Permit By Notification (PBN) **Bureau of**  
Bow, 40627 **Environment**

**TO** Gino Infascelli, Public Works Permitting Officer  
New Hampshire Wetlands Bureau  
29 Hazen Drive, P.O. Box 95  
Concord, NH 03302-0095

Forwarded herewith is the application package prepared by Stantec for the NH DOT Bureau of Highway Design for the subject permit by notification. This project qualifies for activity # 4 Temporary Cofferdams. The proposed work to be completed under this activity consists of installing temporary sandbag dams to eliminate flow through the existing culverts to allow the inspection and assessment in the dry. The information collected from these inspections will be used to inform designers on who best to repair/replace these crossings. That work when the time comes will be permitted separate from this effort.

The lead people to contact for this project are Tobey Reynolds, Highway Design (271-2171 or jamarshall@dot.state.nh.us) or Matt Urban, Wetlands Program Manager, Bureau of Environment (271-3226 or murban@dot.state.nh.us).

A payment voucher has been processed for this application (Voucher #444893) in the amount of \$200.

If and when this application meets with the approval of the Bureau, please send the permit directly to Matt Urban, Wetlands Program Manager, Bureau of Environment.

MRU:mru  
Enclosures

cc:  
BOE – Original  
Town of Bow (4 copies hand delivered when signature was obtained)  
Upper Merrimack River Local Advisory Committee (via certified mail)  
Stephanie Micucci – Highway Design

S:\Environment\PROJECTS\BOW40627\WETAPP - Design.doc



# WETLANDS PERMIT BY NOTIFICATION (PBN)

Water Division/ Wetlands Bureau  
Land Resources Management

Check the status of your notification: [www.des.nh.gov/onestop](http://www.des.nh.gov/onestop)

RSA/Rule: RSA 482-A/ Env-Wt 100-900



## 1. PROJECT TYPES

The PBN process is limited to the 14 project types listed below. Check all project types that apply and confirm the project meets the Project Specific Criteria listed in the Project Specific Criteria document for each project number checked below.

<input type="checkbox"/> 1	<b>Freshwater Seasonal Dock:</b> Construction or modification of a seasonal pier or wharf (dock), located on a non-tidal stream or river or in a lake or pond.	<input type="checkbox"/> 8	<b>Culvert/Bridge Replacement:</b> The replacement of a culvert/bridge on a watercourse with a contributing watershed less than or equal to 25 acres to permit vehicular access to one single family lot or for noncommercial recreational use.
<input type="checkbox"/> 2	<b>Retaining Wall Repair and Replacement:</b> Repair or replacement in-kind of a retaining wall ( <i>in the dry during draw down</i> )	<input type="checkbox"/> 9	<b>Beach Replenishment:</b> Replenishment of an existing non-tidal beach with less than 10 cubic yards of sand.
<input type="checkbox"/> 3	<b>Maintenance Dredge:</b> Maintenance dredging, when necessary to provide continued usefulness of nontidal drainage ditches, man-made ponds, and spillways  <i>Stormwater detention ponds, fire ponds, or agricultural ponds may be exempt from permitting pursuant to RSA 482-A:3, IV-b. See the project specific criteria document for further information.</i>	<input type="checkbox"/> 10	<b>Seasonal Dock Anchoring Pad:</b> Construction of an anchoring pad for a seasonal dock in non-tidal waters
<input checked="" type="checkbox"/> 4	<b>Temporary Cofferdams:</b> Temporary cofferdams and other water control devices constructed in flowing water or adjacent to dams in conjunction with the repair or maintenance of existing structures. All such work shall be designed, and supervised by a professional engineer (PE). Plans must be stamped by a PE.	<input type="checkbox"/> 11	<b>Boatlift:</b> Installation of <i>one</i> seasonal boatlift in non-tidal waters and not within 20 feet of abutter's property line.
<input type="checkbox"/> 5	<b>Docking Structure Repair:</b> Repair of <u>existing</u> tidal docking structures or repair of non-tidal docking structures	<input type="checkbox"/> 12	<b>Watercraft Lift:</b> Installation of <i>one or two</i> personal watercraft lift(s) in non-tidal waters adjacent to a dock.
<input type="checkbox"/> 6	<b>Dry Hydrant:</b> For a dry hydrant ONLY, excavation of less than 10 linear feet within the bank and bed of a surface water that does not exceed 200 square feet in total jurisdictional impact to the bed	<input type="checkbox"/> 13	<b>Residential Utilities:</b> Installation of a residential utility line. Stream impacts limited to a contributing watershed of 25 acres.
<input type="checkbox"/> 7	<b>Maintenance of a Non-Docking Structure:</b> Maintenance, repair or replacement of a non-docking structure.	<input type="checkbox"/> 14	<b>Utility Right-of-Ways:</b> Temporary impacts associated with the inspection, maintenance and repair of existing utility lines within an existing utility right of way.  <i>Use the Utility Maintenance Notification form for this project type.</i>

[shoreland@des.nh.gov](mailto:shoreland@des.nh.gov) or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO BOX 95, Concord, NH 03302-0095

[www.des.nh.gov](http://www.des.nh.gov)




## 2. PROJECT LOCATION

A separate application must be filed with each municipality that jurisdictional impacts will occur in.

ADDRESS: I-93 exit ramp to I-89

TOWN/CITY: Bow

TAX MAP:

BLOCK:

LOT:

UNIT:

US GEOLOGICAL SURVEY TOPO MAP WATERBODY NAME: Bow Brook

LOCATION COORDINATES (If known): N244,893 E1,020,635

UTM ☒ State Plane

☐ Latitude/Longitude ☐

## 3. PROJECT DESCRIPTION:

Provide a brief description of the project, outlining the scope of work to be performed, including a narrative that describes the sequence of construction including pre-construction through post-construction activities and the relative timing and progression of all work. Do not write "see attached".

The project involves the inspection and assessment of the existing twin 60" CMP culvert pipe condition, which are located along Bow Brook and under the I-93 north exit ramp to I-89 north as indicated in Figure 1. Under this project, only temporary impacts are being proposed for the placement of sandbags to temporarily divert water flow at the existing culverts. Temporary sandbag dams will be placed at the inlet and outlet of one culvert to eliminate flow through the culvert to allow the inspection and assessment in "dry" and non-flowing conditions. The work will occur in two phases and is estimated to take two days to complete. Each phase will maintain flow through one culvert while the other culvert flow is temporarily diverted to allow the work to be conducted. The attached plans indicate the limits of the impacts and proposed phasing of the inspection and assessment work.

## 4. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact  
*Temporary = impacts not intended to remain (and will be fully restored to pre-construction conditions) after the project is completed*

Jurisdictional Area	Permanent Sq. Ft.	Temporary Sq. Ft.	Jurisdictional Area	Permanent Sq. Ft.	Temporary Sq. Ft.
Forested wetland		250	Lake		
Emergent wetland		250	Pond		
Wet meadow			Tidal water		
Intermittent stream			Previously-developed upland in TBZ		
Perennial stream / river		475	Other		

**5. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:**

See the Project Specific Criteria document for instructions to complete a &amp; b below.

a. Natural Heritage Bureau File ID: NHB 16 - 1470b. ☒ Designated River the project is in ¼ miles of: Merrimack River (upper); and  
date a copy of the application was sent to Local River Advisory Committee: Month: 6 Day: 8 Year: 2016  
☐ NA**6. APPLICANT INFORMATION (Desired permit holder)**

NAME: Tobey Reynolds - Project Manager

TRUST / COMPANY NAME: NHDOT - Bureau of Highway Design

MAILING ADDRESS: 7 Hazen Drive

TOWN/CITY: Concord

STATE: NH

ZIP CODE: 03301

PHONE: 271-2171

EMAIL or FAX: BUR16@dot.state.nh.us

ELECTRONIC COMMUNICATION: By initialing here: TR, I hereby authorize DES to communicate all matters relative to this application electronically**7. PROPERTY OWNER INFORMATION (If different than applicant)**

NAME: Same as Applicant

COMPANY NAME:

MAILING ADDRESS:

TOWN/CITY:

STATE:

ZIP CODE:

PHONE:

EMAIL or FAX:

ELECTRONIC COMMUNICATION: By initialing here \_\_\_\_\_, I hereby authorize DES to communicate all matters relative to this application electronically

**8. AUTHORIZED AGENT INFORMATION**

NAME: Michael Leach

COMPANY NAME: Stantec Consulting Services, Inc.

MAILING ADDRESS: 5 Dartmouth Drive - Suite 101

TOWN/CITY: Auburn

STATE: NH

ZIP CODE: 03032

PHONE: 603-669-8672

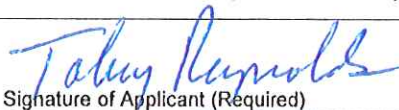
EMAIL or FAX: michael.leach@stantec.com

ELECTRONIC COMMUNICATION: By initialing here ML, I hereby authorize DES to communicate all matters relative to this application electronically



## 9. CONDITIONS AND SIGNATURE

- a. I have reviewed the Project Specific Criteria documents for each project type checked on page 1 of this form and by signing below I am confirming the project meets all of the outlined project specific criteria (Env-Wt 506.03(k))
- b. Within 10 days following completion of the project, the applicant shall submit to the department confirmation of completion of the project, by either paper copy or electronically, with dated, labeled, photograph(s), mounted on 8½" x 11" sheets if paper copy, or digital photo(s) if electronic, depicting the areas where the impact occurred.
- c. All abutters have been notified in accordance with RSA 482-A:3, I.
- d. The project is at least 20 feet from an abutting property line or imaginary extension thereof over surface water unless it receives written agreement from the affected abutter concurring with any impact that may result relative to the abutter's interests. This letter must be notarized if your project is a boat docking facility (RSA 482-A:3-XIII(c)). Notarized abutter permission is not required for maintenance projects.
- e. I authorize the municipal conservation commission to inspect the site of the proposed project.
- f. I have reviewed the information being submitted, and that to the best of my knowledge, the information is true and accurate.
- g. I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.
- h. I am aware that the work I am proposing may require additional state, local or federal permits.
- i. I will confirm the PBN is complete or disqualified by checking the "One-Stop Wetland Permits Query" as outlined in the project specific document or by telephone at 603-271-2147 before starting work, and I will record the Wetlands File Number on the Notification Conditions page in the Project Specific Criteria document.
- j. I will post the completed Notification Conditions at a location on the project property visible to representatives from NHDES and/or the municipal conservation commission.
- k. If this Permit by Notification project is for the installation, construction, or repair of a dock, docking facility, or marina, I will record each permit granted in the registry of deeds for the county or counties in which the real estate is located and provide the department with a copy of the permit stamped by the registry with the book and page and date of receipt. I understand that the permit shall not be effective until so recorded (RSA 482-A:3, VI and Env-Wt 402.20).
- l. The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not forward returned mail.
- m. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.44.

  
Signature of Applicant (Required)

  
Print name legibly

6 / 9 / 2016  
Date

The applicant signing and certifying acknowledgement and comprehension of permit conditions a through m above is the: (check one below):

- ☒ Property Owner  
☐ Agent acting on behalf of the Property Owner

## 10. APPLICATION SUBMITTAL DIRECTIONS

1. Review the Project Specific Criteria document for each project number checked on page 1 to confirm your project qualifies for the PBN process and for a list of and instructions for the required attachments. If all of the required attachments are not provided, this notification and attachments will be returned to you.
2. If you would like your notification processed by NHDES within 10 days, you must obtain the municipal conservation commission or local governing body signature prior to submitting the final application to the Town/City Clerk for signature.
3. If sought, obtain the Conservation Commissions signature as outlined below, number 11;
4. Submit four copies of the application form and materials to the Town/City Clerk and submit the original application form bearing the signature of the Town/City Clerk, additional materials and application fee (\$200) to NHDES by mail or hand delivery.
5. To confirm completion or disqualification of your PBN you must check the "One-Stop Wetland Permits Query" as outlined in the Project Specific Criteria document and record the Wetlands File Number on the Notification Conditions page in your Project Specific Criteria document. **NOTE: YOU WILL NOT RECEIVE CORRESPONDENCE FROM NHDES UNLESS THE FORM IS INCOMPLETE OR DENIED.**

[shoreland@des.nh.gov](mailto:shoreland@des.nh.gov) or (603) 271-2147  
NHDES Wetlands Bureau, 29 Hazen Drive, PO BOX 95, Concord, NH 03302-0095  
[www.des.nh.gov](http://www.des.nh.gov)

## MUNICIPAL SIGNATURES

### 11. CONSERVATION COMMISSION SIGNATURE - REQUIRED FOR 10 DAY PROCESSING


*The Conservation Commission is not required to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for 10 day processing and will be processed in 25 days.*

The signature below certifies that the municipal conservation commission or local governing body has reviewed this application, and: a) waives its right to intervene per RSA 482-A:11; b) believes that the application and submitted plans accurately represent the proposed project; and c) has no objection to permitting the proposed work.

Authorized Commission Signature	Print name legibly	/ / Date
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### 12. TOWN / CITY CLERK - All applications require this section to be completed by the Town/City Clerk

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

 Town/City Clerk Signature	MARDULA NAIK Print name legibly	6/7/2016 Date	Bow Town/City
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#### DIRECTIONS FOR TOWN/CITY CLERK Per RSA 482-A:3,I:

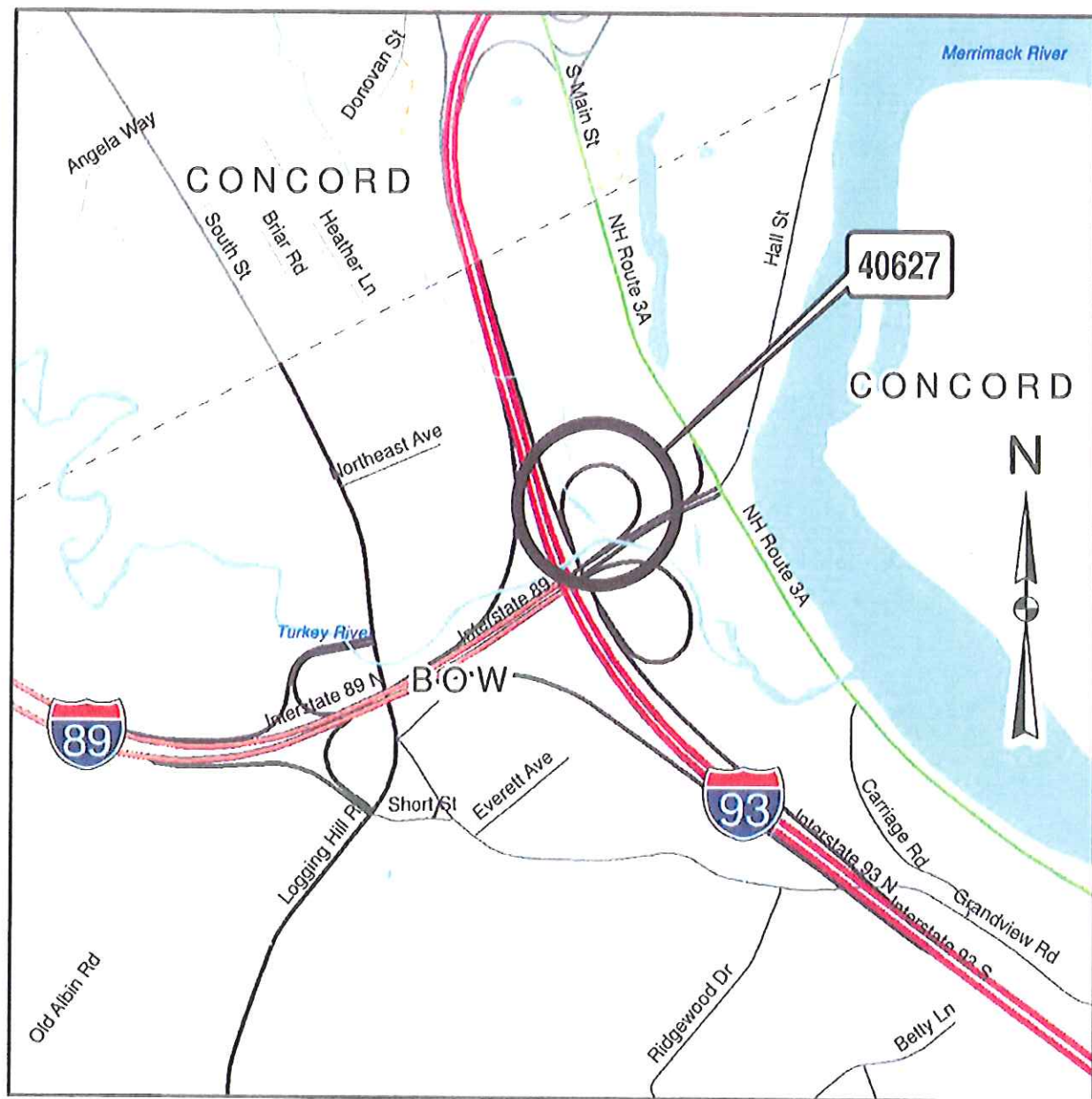
1. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
2. Return the signed original application form and attachments to the applicant so that they may submit the application and attachments to NHDES by mail or hand delivery.
3. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
4. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

#### DIRECTIONS FOR APPLICANT

1. IMMEDIATELY submit the original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.



# BOW I-93 NB RAMP TO I-89 NB



0 0.05 0.1 0.2 0.3 0.4 Miles

## LEGEND

- Streams
- Water Bodies
- US Routes
- State Routes
- Interstates
- Local Roads
- Town Boundary

New Hampshire  
**DOT**  
Department of Transportation

State #: 40627  
Federal #: X-A004-(440)  
**LOCATION MAP**





## Bow, NH

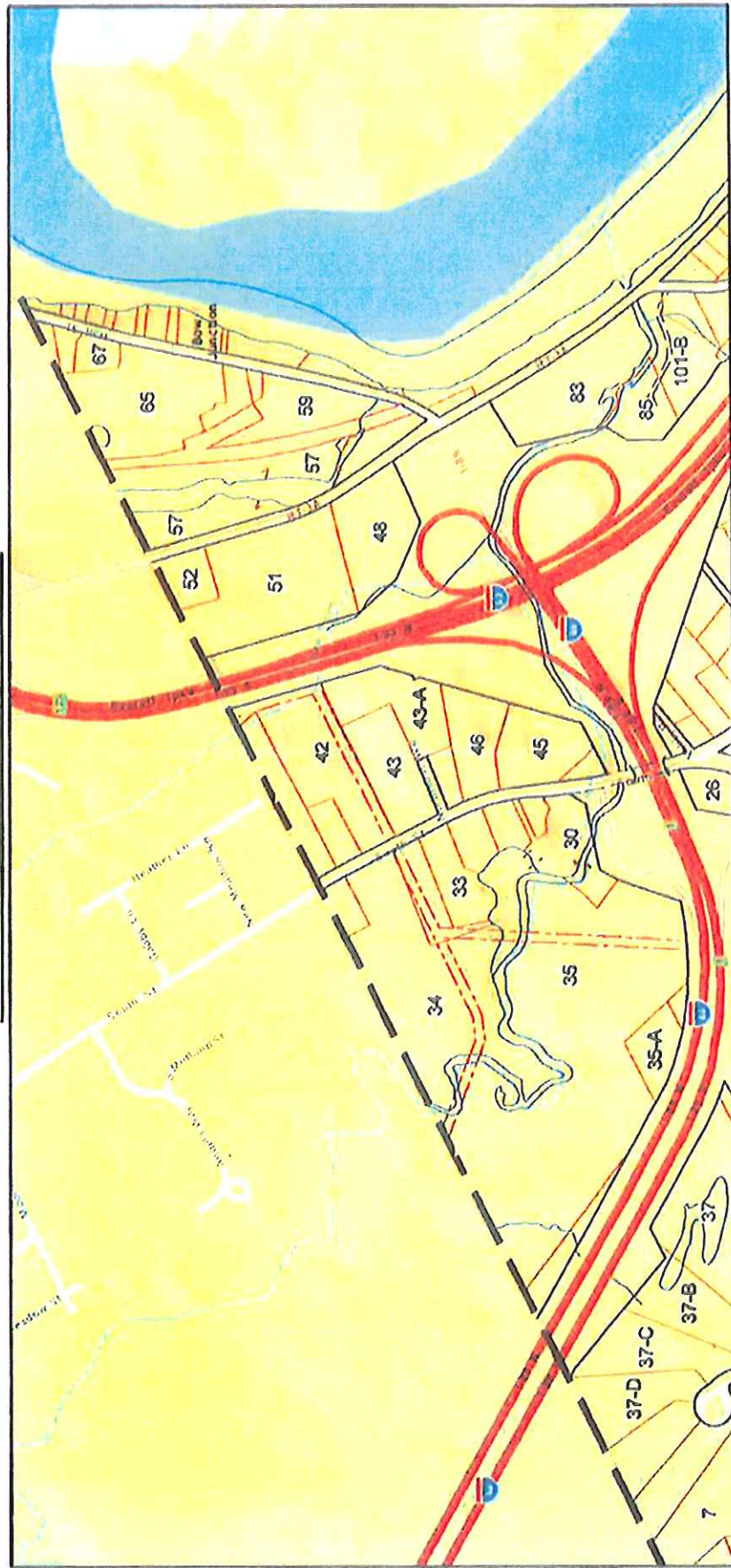
**1 inch = 800 Feet**

1 inch = 800 Feet



CAI Technologies

www.cai-tech.com



Large Scale	RAILROAD	HOOKS
TOWNLIN	ROAD	RW
PROPERTYLINE	ROADCLASSVI	UTILITY
PWATER	BRIDGE	WATER

Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.





UNIFIED PANEL 0542E

# **FIRM** **FLOOD INSURANCE RATE MAP** **MERRIMACK COUNTY,** **NEW HAMPSHIRE** **(ALL JURISDICTIONS)**

PANEL 542 OF 705  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:	COMMUNITY	NUMBER	PANEL	SUBJECT
BOW TOWN OF	330107	0542	E	E
	330110	0542	E	E
	330111	0542	E	E
	330112	0542	E	E

Notes to User: The Map Number shown above should be used when making map orders. The Community Number shown above should be used on insurance applications for the subject community.

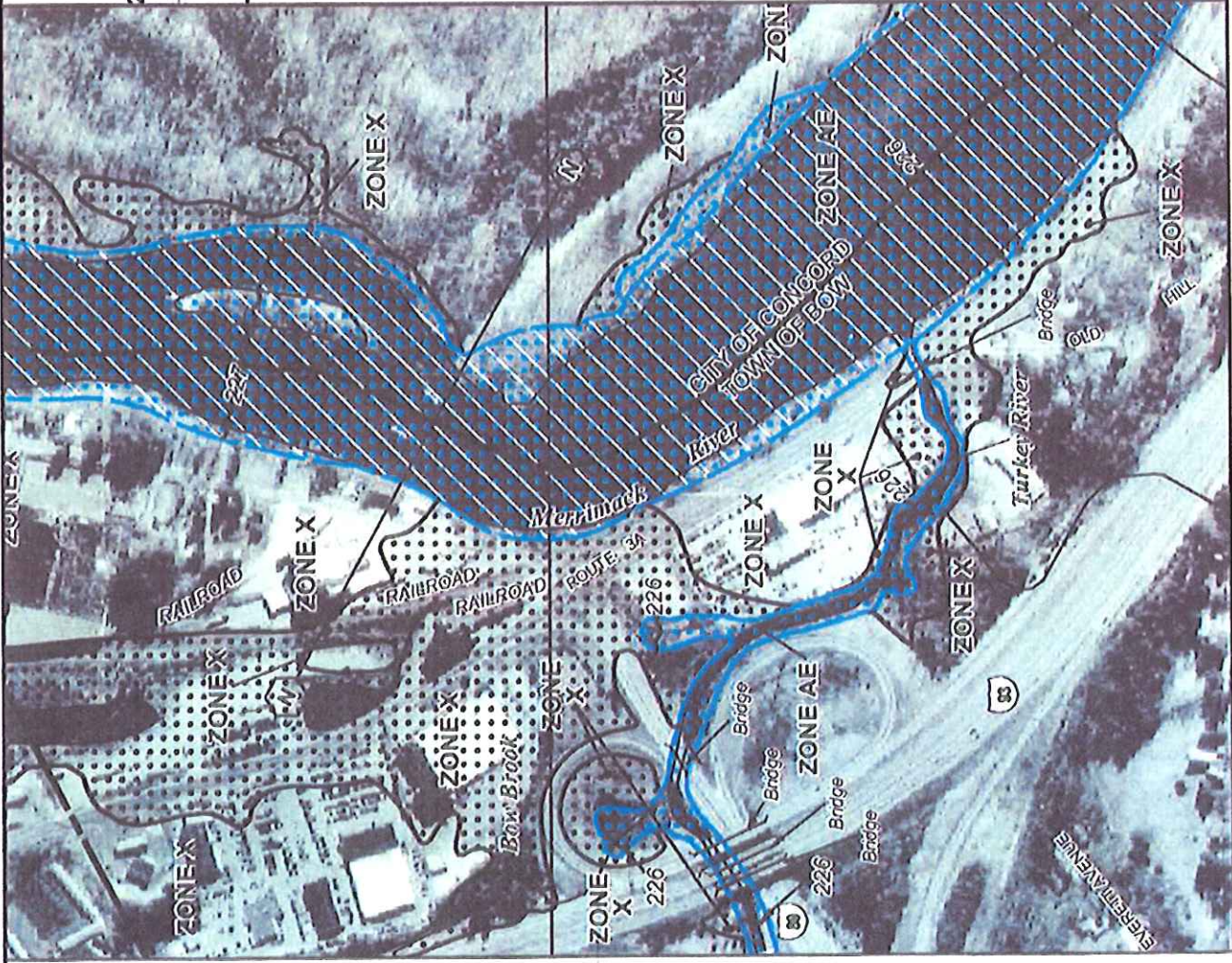


MAP NUMBER  
 330130542E  
 EFFECTIVE DATE  
 APRIL 19, 2010

Federal Emergency Management Agency

## **NATIONAL FLOOD INSURANCE PROGRAM**

This is an official copy of a portion of the above referenced flood map. It was extracted using FIRM On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)





**PBN for Video Culvert Inspection – Bow, NH**  
**I-93 North exit ramp to I-89 North at Bow Brook - NHDOT #40627**  
**Owner: New Hampshire Department of Transportation**

Suggested Construction Sequence:

- A. Twin 60" CMP culverts - Sta. 500+70 +/- RT 65' +/- & Sta. 501+80 LT 140'+/-
1. Work shall be done during low flow conditions and appropriate weather conditions, such as when rain is not forecast or anticipated 48 hours prior to or during the proposed inspection day. It is anticipated the video inspection will be completed within two days, including setup and removal of the temporary water diversion measures. The work is proposed in two (2) phases.
  2. Phase 1 - Using men and equipment, place sandbags starting at upstream edge of water approximately 10 feet from inlet headwall and continue to place sandbags to divert flow to the other culvert. Construct temporary diversion similar to Routine Roadway Maintenance BMPs No. 5 and 11 around culvert inlet headwall for culvert or culverts to be inspected.
  3. At downstream end of culvert, place sandbags beginning at the edge of water and construct similar temporary diversion similar to Routine Roadway Maintenance BMPs No. 5 and 11 around culvert outlet end section for culvert to be inspected in the dry.
  4. Carry video inspection equipment to the culvert inlet area, setup and conduct video inspection of existing culverts.
  5. Monitor and adjust sandbags as necessary to maintain appropriate conditions to conduct video inspection.
  6. Remove temporary diversion sandbags starting at the downstream end upon completion of the video inspection of the first pipes. Remove sandbags at the upstream end to re-establish flow to culverts.
  7. Phase 2 - Using men and equipment, place sandbags starting at upstream edge of water approximately 10 feet from inlet headwall and continue to place sandbags to divert flow to the previously inspected culvert using similar methods as noted under steps 2-6 above so as to conduct video observation of the remaining culvert. Construct temporary diversion similar to Routine Roadway Maintenance BMPs No. 5 and 11 for culvert to be inspected.
  8. Upon completion of the video inspection of all culverts, remove temporary division sandbags starting at the downstream end and restore flow to all culverts.



## BMP #5

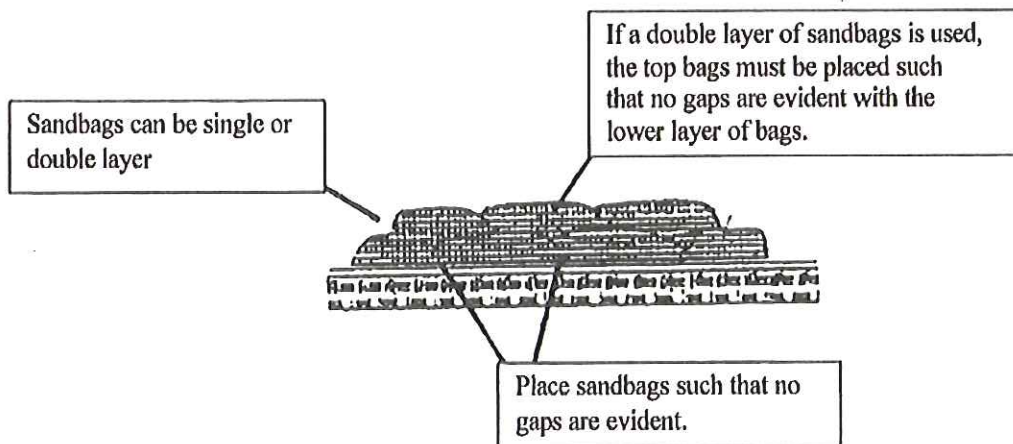
### Sandbags

Sandbags work well as diversion structures, temporary cofferdams, sediment control devices and temporary flow dissipaters during any number of routine roadway maintenance activities.

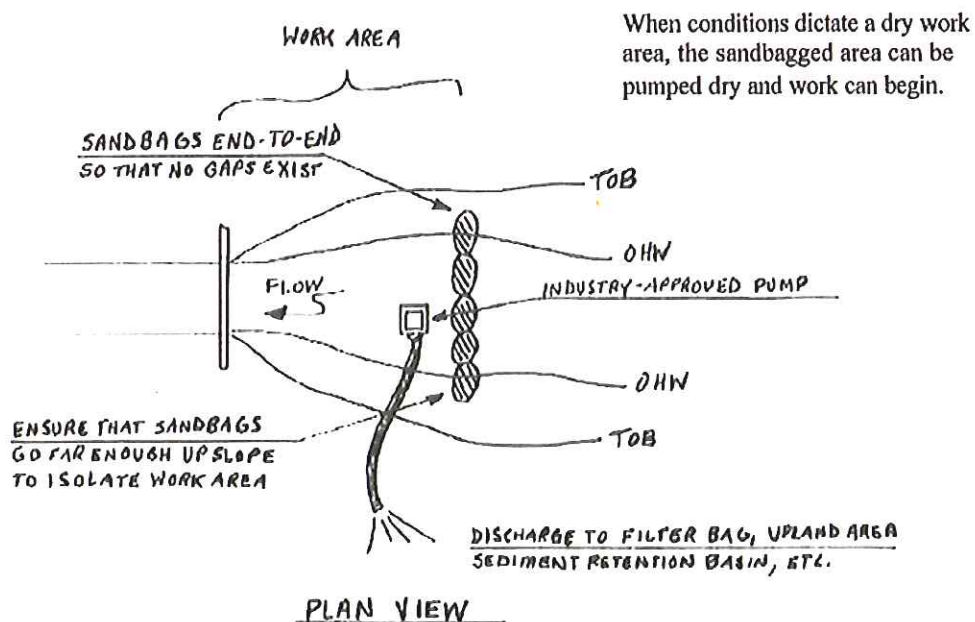
When appropriately designed and used as a cofferdam, these sandbags are stable enough for water to pond behind them. The ponded water behind the dam structure can then be pumped to a sediment retention basin or filter bag to allow work to be performed in-the-dry.

When used in conjunction with other BMPs, sandbags can be useful at:

- ensuring that sediment does not enter surface waters or wetlands while stabilizing exposed soil surfaces;
- helping to retain sediment in a sediment retention basin; and
- diverting and/or dissipating runoff water during roadside ditch maintenance.



Sandbags used as a cofferdam below:



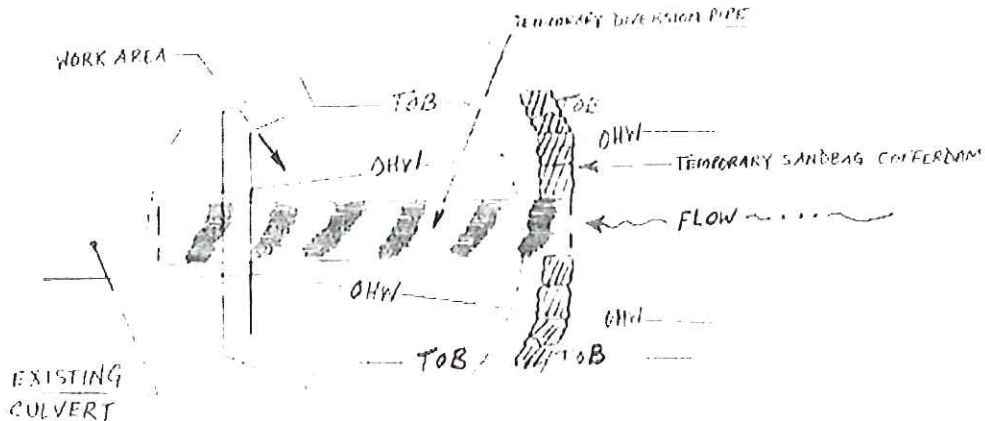
## **BMP #11**

### **Temporary Diversions**

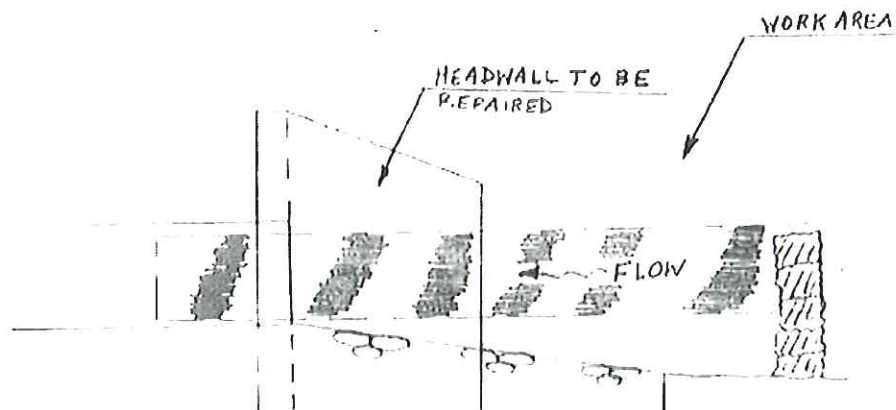
In areas subject to rapid water movement, a temporary dam can be constructed with sandbags upstream of a headwall in such a way as to minimize erosion and resulting water turbidity. The dam prevents water from entering the proposed work zone and directs flow into the temporary diversion pipe. The opposite end of the diversion pipe is inserted into the existing culvert, thus allowing clean flow to pass through the work zone. The pipe to be used shall be of sufficient size to carry the water flow. The structure shall be completely removed upon the completion of work.

The sandbags shall be stacked no higher than sufficient to direct water into the diversion pipe. They shall be appropriately designed to ensure work zone safety is not compromised, while maintaining water quality controls.

When conditions dictate a dry work area, the sandbagged area (BMP #5) can be pumped dry to a sediment retention basin and work can begin.



PLAN VIEW



ELEVATION VIEW



**PBN for Video Culvert Inspection – Bow, NH**  
**I-93 North Exit Ramp at I-89 North at Bow Brook - NHDOT# 40627**  
**Owner: New Hampshire Department of Transportation**

#1 – Impact A – Standing upstream and north of the existing twin CMP culverts inlet under the exit ramp from I-93 north at I-89 near sta. 501+80 left and looking southerly and downstream toward the culvert inlet and proposed temporary water diversion location and impact area for video inspection. Taken: 4/18/16



#2 – Impact B – Standing downstream and south of the existing twin CMP culverts outlet under the exit ramp from I-93 north at I-89 near sta. 500+70 right and looking northerly and upstream toward the culvert outlet and proposed temporary water diversion location and impact area for video inspection. Taken: 4/18/16



**Leach, Michael**

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**From:** Tuttle, Kim <Kim.Tuttle@wildlife.nh.gov>  
**Sent:** Friday, June 03, 2016 11:46 AM  
**To:** Leach, Michael  
**Cc:** Adams, Tim  
**Subject:** RE: NHB16-1470 - Rehabilitation or replacement of existing twin culverts under I-93 exit ramp at Bow Brook

Mike,

Sorry for the delay. The NHFG Nongame and Endangered Species Program has reviewed NHB16-1470 for the proposed assessment of the existing twin culverts under the I-93 exit ramp at Bow Brook. We do not expect impacts to American eel and wood turtle as a result of the proposed work. We understand that we will be reviewing any future culvert replacement at a later date. Please feel free to call me if you have any questions about this review.

Sincerely,

Kim Tuttle  
Certified Wildlife Biologist  
NH Fish and Game  
11 Hazen Drive  
Concord, NH 03301  
603-271-6544

**From:** Leach, Michael [<mailto:Michael.Leach@stantec.com>]  
**Sent:** Tuesday, May 31, 2016 9:56 AM  
**To:** Tuttle, Kim  
**Cc:** Adams, Tim  
**Subject:** NHB16-1470 - Rehabilitation or replacement of existing twin culverts under I-93 exit ramp at Bow Brook

Hi Kim;

As a follow-up to our telephone conversation last week, we are working with NHDOT on first assessing the condition of the existing culverts to determine the next steps for rehabilitation or replacement. To conduct an assessment of the culverts we are planning to file a Permit by Notification (PBN) to use temporary sandbag cofferdams to allow inspection of the culverts in dry conditions. We will be assessing one culvert at a time and will maintain flow through the other culvert. We anticipate the work will take two days. Could you please confirm the proposed work for PBN application is acceptable for this portion of the project.

As discussed, a separate welland permit application will be submitted for the proposed rehabilitation or replacement of the culverts based upon the assessment findings. We will coordinate with you on the permit application for the proposed culvert improvement work. My understanding is that slip lining the existing culverts is not recommended by NH Fish and Game.

Please let me know if you need additional information for the PBN application.

Thank you,

Mike



**Michael Leach**

Associate

Stantec

5 Dartmouth Drive Suite 101 Auburn NH 03032-3984

Phone: (603) 206-7538

Cell: (603) 203-3048

Fax: (603) 669-7636

Michael.Leach@stantec.com



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Please consider the environment before printing this email.

# Memo



## NH NATURAL HERITAGE BUREAU NHB DATACHECK RESULTS LETTER

To: Michael Leach, Stattec Consulting Services, Inc.  
5 Dartmouth Drive - Suite 101  
Auburn, NH 03032

From: Amy Lamb, NH Natural Heritage Bureau

Date: 5/16/2016 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau

NHB File ID: NHB16-1470

Town: Bow

Location: I-93 North Exit Ramp to I-89 North  
Interstate 93 North exit ramp

Description: Rehabilitation or replacement of existing twin culverts under existing Interstate 93 North exit ramp

cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: Please contact NH Fish & Game to address wildlife concerns.

### Vertebrate species

State <sup>1</sup>	Federal	Notes
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American Eel ( <i>Anguilla rostrata</i> )	SC	--	Contact the NH Fish & Game Dept (see below).
-------------------------------------------	----	----	----------------------------------------------

Wood Turtle ( <i>Glyptemys insculpta</i> )	SC	--	Contact the NH Fish & Game Dept (see below).
--------------------------------------------	----	----	----------------------------------------------

<sup>1</sup>Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (\*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

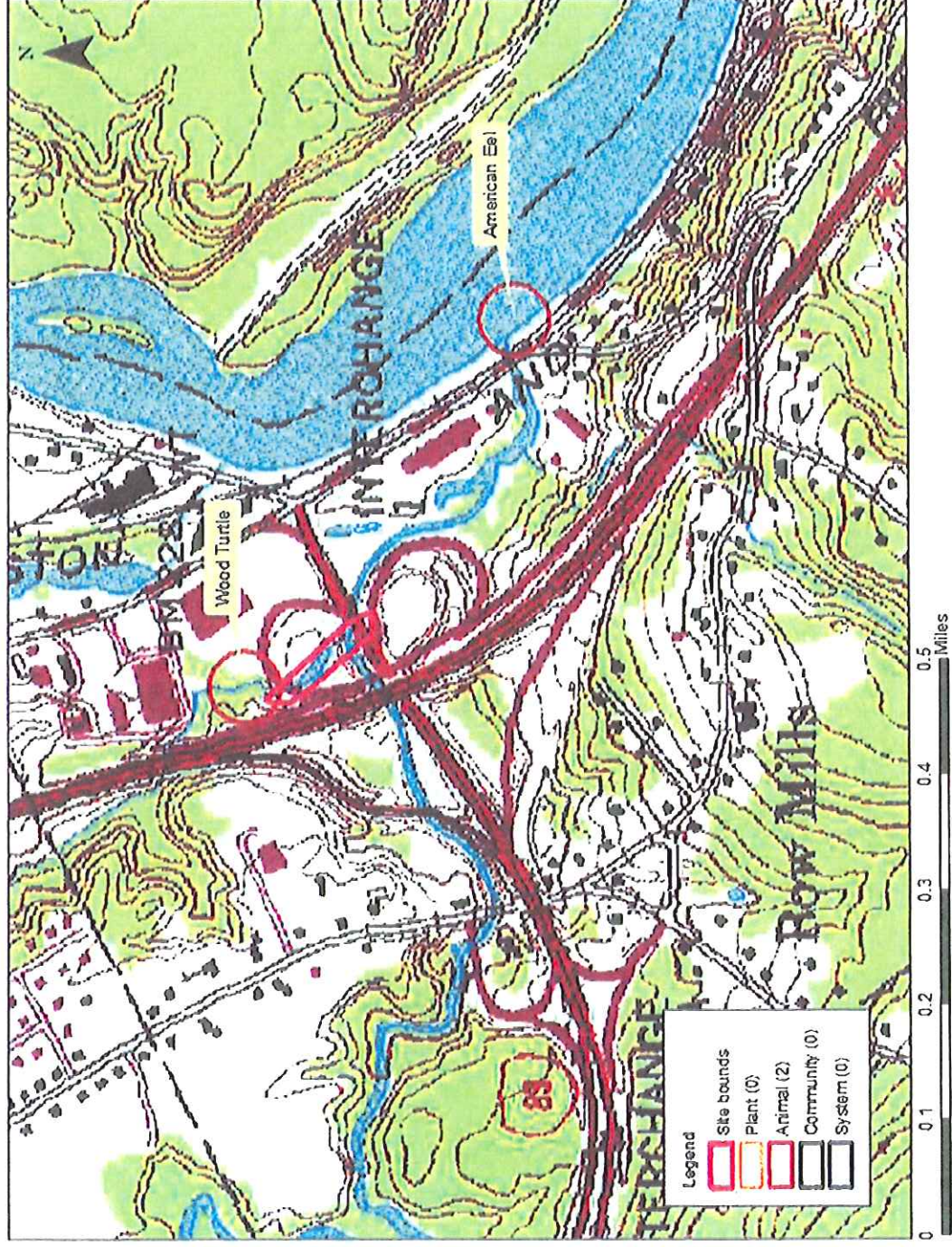
A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Resources and Economic Development  
Division of Forests and Lands  
(603) 271-2214 fax: 271-6488

DRED/NHB  
172 Pembroke Rd.  
Concord, NH 03301



NHB16-1470



## New Hampshire Natural Heritage Bureau - Animal Record

**American Eel (*Anguilla rostrata*)****Legal Status**

Federal: Not listed  
State: Special Concern

**Conservation Status**

Global: Apparently secure but with cause for concern  
State: Rare or uncommon

**Description at this Location**

Conservation Rank: Not ranked  
Comments on Rank:

Detailed Description: 2000: Area 13215: Not enumerated.

General Area:

General Comments:

Management

Comments:

**Location**

Survey Site Name: Merrimack River Drainage  
Managed By:

County: Merrimack

Town(s): Bow

Size: 1.9 acres

Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2000: Turkey River

**Dates documented**

First reported: 2000

Last reported: 2000

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.



## New Hampshire Natural Heritage Bureau - Animal Record

Wood Turtle (*Glyptemys insculpta*)

Legal Status	Conservation Status
Federal: Not listed	Global: Apparently secure but with cause for concern
State: Special Concern	State: Rare or uncommon

**Description at this Location**

Conservation Rank: Not ranked  
Comments on Rank:

Detailed Description: 2010: Area 12748: 2 juveniles observed.  
General Area: 2010: Area 12748: Forested swamp adjacent to Bow Brook, a perennial stream. Plants include Impatiens, sedges, skunk cabbage, sensitive fern, poison ivy, arrowwood, honeysuckle, alternate leaved dogwood, and red maple.  
General Comments: 2010: Area 12748: Observation comment: Turtle 1 was ~3.5 inches long. Turtle 2 was 2.8 inches long. 'Location of the turtles seems unlikely given the physical obstacles they must have overcome. The nearest known pop is in a tributary to the Turkey River, several miles upstream. These turtles either had to cross 3A from the Merrimack River (no known pop there) or travel from the Turkey River up 2 long culverts (or over land, crossing an off ramp from I-89). This does not seem like secure or promising habitat for wood turtles.'

Management  
Comments:

**Location**

Survey Site Name: Bow Junction  
Managed By:

County: Merrimack  
Town(s): Bow  
Size: 1.9 acres  
Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2010: Area 12748: Park behind the Pitco Fryolator building on the west side of Rte. 3A. Walk west to Bow Brook, paralleling the highway. Follow the brook south to the wetland area on the east side of the brook.

**Dates documented**

First reported: 2010-06-09  
Last reported: 2010-06-09

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.